EXCISION OF THE WRIST BY A MODIFICATION OF MYNTER'S METHOD.[1]

By WILLIAM J. TAYLOR, M.D.,

OF PHILADELPHIA.

At the eighth session of the American Orthopædic Association, held in Washington in 1894, Dr. Hermann Mynter, of Buffalo, read a paper upon excision of the wrist-joint by a new method, and described in detail an operation which he had performed some months before. This method had been suggested by Professor Studsgaard, of Copenhagen, in 1891, and consisted in making a longitudinal incision between the third and fourth metacarpal bones, and thus opening up the wrist-joint between the os magnum and uneiform bones and between the semilunar and cuneiform bones. Both the superficial and deep palmar arches were cut, but easily ligated, in the wound. Dr. Mynter stated that he did not know whether this suggestion had been acted upon before, but that three months previously he had operated by this method upon a woman, aged thirty-five, with tubercular osteitis of the carpus. He made a slight change in the original proposition of Professor Studsgaard, however, in splitting the hand between the second and third metacarpal bones, and thus entering the wrist between the trapezoid and os magnum and between the scaphoid and semilunar bones, as by this incision the hand was more evenly divided. The dorsal incision reached up to the radius, and the palmar incision did not extend farther than the base of the thenar of the thumb. The annual volar ligament was, therefore, not severed. His description of the operation, and the ease with which the bones of the carpus could be extirpated with the scissors as well as the surfaces of the radius, ulna,

[1] Read before the Philadelphia Academy of Surgery, January, 1900.

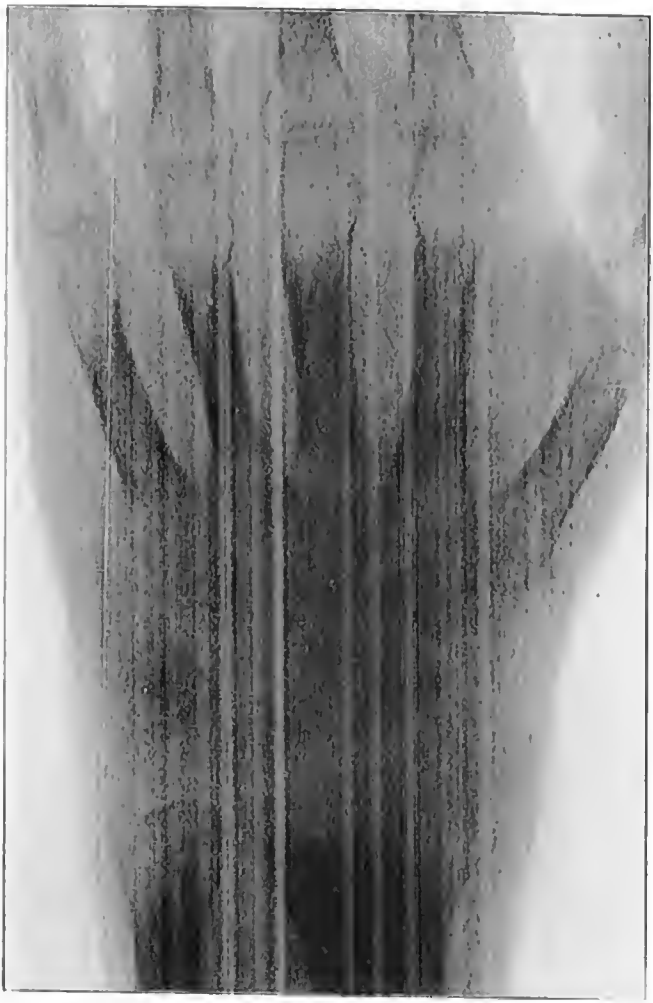

FIG. 1.—Tuberculosis of carpus. Skiagraph made just before operation of excision.

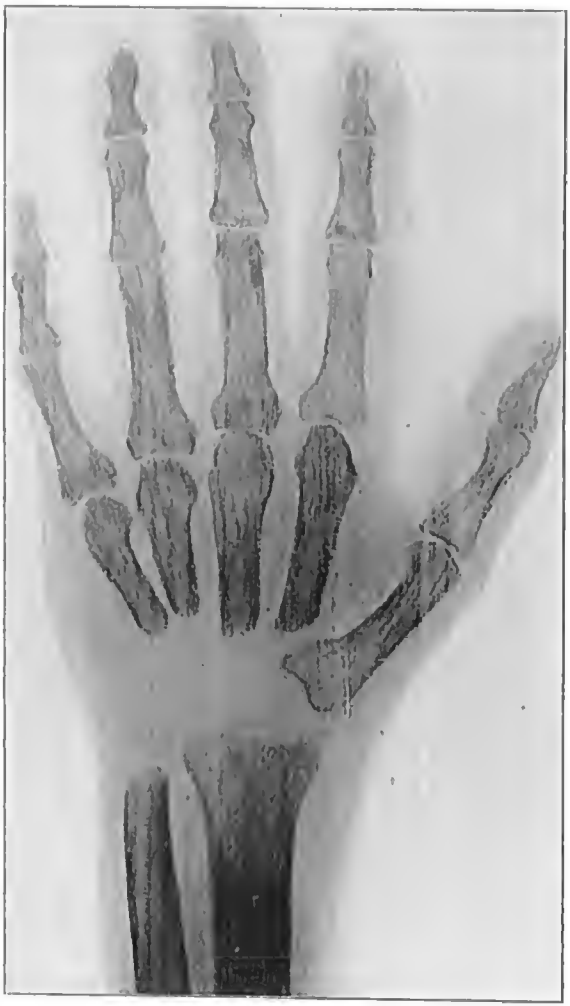

Fig. 2.—Skiagraph showing condition three months after excision of carpus for tuberculosis.

and metacarpal bones by a small saw, made a very lasting impression upon me, and I decided to employ this method at the first opportunity.

Dr. Mynter tells me in a letter dated October 21, 1899, that he has performed this operation twice since with perfect results; but these cases have not been published. He makes the statement that he splits the palmar surface only to the neighborhood of the superficial arch, and does not sever either arches nor open the palmar bursa.

I have tested this method in the following instance:

The patient is thirty-two years of age and a motor-man by occupation. The family history is good, with the exception that his father died of necrosis of the bones of the face. He had had the ordinary diseases of childhood, and when twelve years of age an abscess in the knee. Two years ago he had rheumatism. Shortly after this he noticed an abscess in his left shoulder, which finally discharged at two places on the arm; both these openings gradually closed, and now, beyond some scars, there is nothing remaining except an almost complete ankylosis of the left shoulder-joint. About two years ago he first began to have pain in the right wrist-joint, but he kept at work for nearly a year, the pain at times being better and at other times worse.

When I first saw him in September, the wrist was swollen and very painful, and had the appearance of typical tubercular arthritis of the wrist-joint. The fingers of the hand were stiff from inflammatory adhesions. He was admitted to the wards in the Orthopædie Hospital, September 20, 1899, and discharged October 21, 1899.

After placing him under the influence of ether and with the hand elevated, an Esmarch bandage was passed around the limb above the elbow, which effectively controlled the circulation. I made an incision upon the dorsum of the hand, extending from the radius downward between the second and third fingers, and split the hand and wrist, but exercised the greatest care not to carry my incision to the deeper tissues of the palm of the hand, nor to incise the sheath of the flexor tendons nor of the palm fascia. Neither of the palmar arches were cut, as I wished, if possible, not to make the palmar incision, and thus destroy the strength of the hand itself. I was astonished to see the facility

with which the wrist-joint could be exposed, and also to see that no tendons whatever were divided by this incision, except one tendon attached to the carpus itself. I was enabled to clean out all of the bones of the wrist, cut away the end of the ulna and radius with a saw, as well as the proximal ends of the metacarpal bones, and with scissors I was able to cut away a large amount of gelatinoid and tubercular tissue from the sheath of the tendons and intermuscular spaces. There was no need, whatever, for splitting the hand farther than this, and the operation was done

FIG. 3.—Photograph of anterior surface of wrist three months after excision of carpus for tuberculosis.

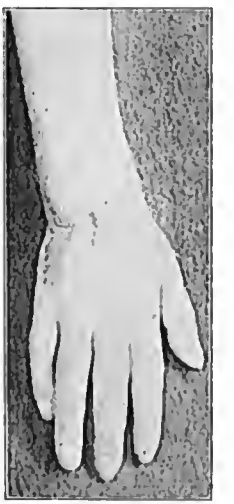

FIG. 4.—Photograph of posterior surface of wrist three months after excision of carpus for tuberculosis.

with as great ease and in as full view as an excision of the knee-joint.

The wound in the skin brought together with silkworm sutures, the tissues having first been brought together with cat-gut, and the dead space between the bones of the wrist and of the hand was packed with iodoform gauze. This was removed in three days, and a small amount of packing kept up at intervals until the wound entirely healed, which was in the course of about

three weeks. The hand, of course, was kept upon a splint. I regret very much at the time of operation I did not break up all of the adhesions in the fingers, as, since that time, we have had a great deal of trouble in overcoming this stiffness in the tendons and in the finger-joints themselves. I had a skiagraph taken of the hand before operation, as well as a skiagraph of the hand since the wound has been entirely healed. The result is most excellent. I do not think, without some such incision, it would have been possible to have gotten rid of the whole of the tuberculous bone, certainly neither Lister's nor any of the older operations would have accomplished the desired end so readily.

While he was in the hospital he complained of a great deal of cough, which was relieved by creosote, as well as of a painful swelling just to the left of the sternum over the third rib. After he left the hospital, this pain and discomfort continued and the swelling increased. He was again admitted to the hospital, ether given, a good-sized cold abscess opened, and a sinus found which extended out towards the left shoulder; this was thoroughly curetted and packed, and this wound is now about well. When he was under ether for this operation, opportunity was taken to break up the adhesions in his fingers, and, although they are still very stiff, considerable progress has been made.

The accompanying skiagraphs and photographs were taken by Dr. D. F. Weeks, the resident surgeon.